

REMARKS

New claims 92-100 are added to the application. No new matter is added as the originally-filed application supports the subject matter of the new claims, at for example, figure 3. Claims 22, 31-34 and 92-100 are pending in the application.

The Examiner provides two objections and one rejection based on the amended language "curved upper surfaces" wherein curved was added to claim 22 in Applicant's response filed December 26, 2001. Claim 22 stands rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103 as being obvious over, Kleine et al. (U.S. Patent No. 3,905,100). Claims 22 and 31-33 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103 as being obvious over, Martin (U.S. Patent No. 154,694). Claim 34 stands rejected under 35 U.S.C. §103 as being unpatentable over Martin.

Regarding the two objections and one rejection based on the amended language "curved upper surfaces", Applicant's response filed December 26, 2001, is objected to under 35 U.S.C. §132 as introducing new material regarding the amended language "curved" upper surfaces added to claim 22. The specification is objected to for failing to provide proper antecedent basis for the amended language "curved upper surfaces" set forth in claim 22 referring to 37 CFR §1.75(d)(1) and MPEP §608.01(o). Claims 22 and 31-34 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter not described in the

specification regarding the amended language “curved upper surfaces” added to claim 22. Support for the amended language “curved upper surfaces” is provided at Fig. 3 of the originally-filed application, and therefore, the amended language is supported.

The Examiner is respectfully referred to MPEP §2163, Guidelines for the Examination of Patent Applications under 35 U.S.C. 112, Para. 1, “Written Description” Requirement, section I., which explicitly states: “It is now well accepted that a satisfactory description may be in the claims or in any other portion of the originally filed specification....and applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams and formulas that fully set forth the claimed invention....possession may be shown in a variety of ways including...the disclosure of drawings”. MPEP §2163, section I. Additionally, the Federal Circuit Court has resolved the issue stating that **drawings alone** may be sufficient to provide the “written description of the invention” required by the first paragraph of 35 U.S.C. §112. *Vas-Cath, Inc. vs. Mahurkar*, 935 F.2d. 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991) (emphasis added). *See also Ex parte Horton*, 226 USPQ 697 (B.P.A.I. 1985) (drawings may be relied upon to satisfy the disclosure requirements of 35 U.S.C. §112). Moreover, the MPEP clearly states, “information contained in any one of the specification, claims or drawings of the application as filed might be added to

any other part of the application without introducing new matter." MPEP §2163.06.

Claim 22 recites a plurality blocks over a panel, the blocks having curved upper surfaces. At page 10, lines 16-18 of the originally-filed application, such states that "ribs 140, 142 and 144 (also referred to as blocks) have upper surfaces 141, 143 and 145, respectively." Referring to Fig. 3 of the originally-filed application, ribs (or blocks) are referenced by numerals 140, 142, 144 and shown to have upper surfaces 141, 143 and 145, respectively, and such upper surfaces are clearly shown to be curved by the curved shading lines. Accordingly, the amended language, curved upper surfaces as recited in claim 22, is supported and described in the specification by the drawings, and pursuant to the above authority, is appropriate support for the written description of §112, first paragraph. Consequently, the §112 rejection against claims 22 and 31-34 is inappropriate and should be withdrawn.

Moreover, pursuant to the above authority, Applicant has appropriately amended the specification to recite, "exemplary upper surfaces 141, 143 and 145 comprise curved upper surfaces of ribs (blocks) 140, 142 and 144, respectively". Such recitation does not introduce new material pursuant to the above authority, and therefore, the objection to Applicant's response filed December 26, 2001, under 35 U.S.C. §132, is inappropriate and should be withdrawn. Additionally, the amended specification overcomes the objection based on the specification

failing to provide proper antecedent basis, and therefore, the objection based on 37 C.F.R. 1.75(d)(1) and MPEP §608.01(o) should be withdrawn.

Regarding the anticipation rejections against claim 22 based on Kleine, and alternatively Martin, claim 22 recites a plurality of blocks over a panel, and the blocks having curved upper surfaces and being configured to support a board while leaving integrated circuit chip components extending between the block upper surfaces and the panel. Martin and Kleine are completely devoid of any teaching to blocks having curved upper surfaces as recited in claim 22. Therefore, Martin and Kleine, singularly or in any combination, fail to teach a positively recited limitation of claim 22. For this reason, the anticipation rejections based on Kleine, and alternatively Martin, are inappropriate and should be withdrawn.

The Examiner attempts to correct the deficiency in the teachings of Martin and Kleine by providing an obviousness rejection based on each reference and alleging it would have been an obvious matter of design choice to provide curved upper surfaces since Applicant has not disclosed that curved upper surfaces solve any stated problem or is for any particular purpose, and it appears that the invention would perform equally well with flat surfaces (Page 3 of Paper No. 9). The Examiner is mistaken.

Respectfully, the Examiner is attempting to simplify the difficult task of determining obviousness by focusing on the difference of only one limitation recited in claim 22 and the prior art, and such a focus is contrary to the long

held patent legal doctrine to consider the claimed invention “as a whole” during examination for allowance. Focusing on the obviousness of substitutions and differences instead of on the invention as a whole is a legally improper way to simplify the difficult determination of obviousness. *Hybritech Inc. vs Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81, 93 (Fed. Cir. 1986); see also MPEP §§2141 and 2143.03. Focusing on minor differences between the prior art and the claimed invention is inappropriate. *Northern Telecom, Inc. vs. Datapoint Corp.*, 908 F.2d 931, 15 USPQ2d 1321, 1324 (Fed. Cir. 1990) cert. denied, 498 U.S. 920 (“whether the changes from the prior art are ‘minor’, as Datapoint argues, the changes must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the patentee’s method and device”). By focusing on only one limitation of the claimed invention, that is, curved for upper surfaces, the Examiner is inappropriately not evaluating the claimed invention as a whole. Evidence the Examiner is not considering the Applicant’s claimed invention as a whole is the fact Applicant’s claimed invention recites an integrated circuit package separator and Kleine allegedly teaches a **carpet cutter guide** (abstract) while Martin is allegedly concerned with knitted fabric of stocking-factories for ensuring a more uniform stretching of the fabric (col. 1, para. 2). Since the Examiner is not considering the claimed invention as a whole as required by the above authority,

the obviousness rejections based on Kleine and Martin are inappropriate and should be withdrawn.

Further evidence the Examiner is not considering the Applicant's claimed invention as a whole is the finding of "obvious design choice" referring to the difference between curved and flat upper surfaces. Such is not the test for obviousness and is effectively focusing on the obviousness of differences instead of on the invention as a whole. The Examiner is attempting to simplify the difficult determination of obviousness contrary to the above authority. Moreover, the Federal Circuit has stated that to require an Applicant to include in his specification evidence and arguments regarding whether particular subject matter was a matter of "design choice" would be tantamount to requiring the applicant to divine the rejections the PTO will proffer before the application is filed. *In re Chu*, 66 F.3d 292, 36 USPQ2d 1089, 1094 (Fed. Cir. 1995). The Examiner alleges that it appears that the invention reciting to curved upper surfaces would perform equally well with flat [upper] surfaces (pgs. 3 and 4 of paper no. 9). Not only is such a statement not relevant to the obviousness determination as the above authority indicates, such a self-serving conclusion needs to be, respectfully, contradicted. Blocks having curved upper surfaces as recited in claim 22 would, for example, facilitate alignment and positioning of the integrated circuit chip components between the block upper surfaces and the panel as the board is placed over the separator. Blocks with flat upper surfaces, in no reasonable or fair interpretation, could facilitate alignment and positioning of the

integrated circuit chip components as there is no curved upper surface for the chip components to ride against during placement of the board. Accordingly, the Examiner's rationale that curved upper surfaces are an obvious "design choice" because the claimed invention would perform equally well with flat [upper] surfaces is incorrect, and for this additional reason, the obviousness rejections are inappropriate and should be withdrawn.

Moreover, Kleine is an improper reference against the claimed invention of the present application because such is non-analogous art, that is, not in the field of the Applicant's endeavor, and is not reasonably pertinent to the particular problem with which the Applicant was concerned. MPEP §2141.01(a) refers to case law to state that "in order to rely on a reference as a basis for rejection of an Applicant's invention, the reference must either be in the field of the Applicant's endeavor or, if not, then be reasonably pertinent to a particular problem with which the inventor was concerned, (*In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ 2d. 1443, 1444 (Fed. Cir. 1992). Accordingly, a two prong test must be met to determine whether a reference is appropriate for an obviousness rejection.

The first prong of the test is to determine if the reference is in the field of the Applicant's endeavor. Kleine is clearly not in the field of the Applicant's endeavor. Applicant's endeavor is in the integrated circuit industry such that the Applicant discloses an exemplary method of forming integrated circuit packages, as well as devices for separating integrated circuit packages. (Page 1, lines 4-5

of Applicant's originally-filed specification). The disclosure of Kleine presents an endeavor in carpet cutter guides which allow the convenient and accurate cutting of bulk rolls of carpeting to precise width and length (abstract; col. 1, lines 22-37). In no fair or reasonable argument does such teachings by Kleine be characterized as being in the same field as the Applicant's endeavor. Consequently, the first prong of the test for non-analogous art is not met, and therefore, the second prong must be considered.

The second prong of the test is whether Kleine is reasonably pertinent to a particular problem with which the Applicant was concerned. Applicant's endeavor includes circuit constructions having integrated circuit chips bonded to circuit boards which can be fabricated by joining integrated circuit chips on a single large circuit board and subsequently cutting the circuit board to separate discrete constructions from one another, the discrete constructions referred to as integrated circuit packages. (Page 1, lines 8-13 of the originally-filed specification). The integrated circuit packages are supported on a support, or a stripper plate, after separation, the stripper plate is manually lifted off pins and the integrated circuit packages are removed (Page 4, lines 10-17 of the originally-filed specification). However, difficulties can occur during the separating of the integrated circuit packages such that the separated integrated circuit packages can be broken as the stripper plate is lifted off the pins (Page 4, lines 18-20 of the specification). Accordingly, a problem that the Applicant is concerned with is to reduce or eliminate breakage of integrated circuit packages

during the processing thereof. However, the problem that Kleine was concerned with was dealing with a long felt need for an accurate but relatively inexpensive carpet cutter guide which is durable enough to withstand the treatment normally resulting from carpet-cutting operations (col. 1, lines 47-53). Can it possibly be argued that a person dealing with reducing or eliminating breakage of integrated circuit packages during the processing thereof would consider a reference dealing with improving a carpet cutter guide which is durable enough to withstand the treatment normally resulting from carpet-cutting operations? The answer is clearly no. Accordingly, the second prong of the test for non-analogous is not met.

Both prongs of the test are answered in the negative. That is, Kleine is not in the field of Applicant's endeavor and is not reasonably pertinent to the particular problem with which the Applicant was concerned. Consequently, for this additional reason, Kleine is an improper reference to rely on as a basis for an obviousness rejection against the Applicant's claimed invention, and therefore, the obviousness rejection must fail and should be withdrawn.

For all the above reasons, Kleine and Martin, fail to teach or suggest, singularly or in any combination, the blocks have curved upper surfaces as recited in claim 22. Accordingly, the anticipation and obviousness rejections based on Kleine and Martin are inappropriate and should be withdrawn. Applicant respectfully requests allowance of claim 22 in the next office action.

Moreover, Martin is an improper reference because such is non-analogous art, and therefore, for this additional reason, the obvious rejection based on

Martin is improper and should be withdrawn. Regarding the first prong of the test for non-analogous, that is, whether the reference is in the field of the Applicant's endeavor, Martin is clearly not in the field of Applicant's endeavor. Applicant's endeavor is in the integrated circuit industry such that the Applicant discloses methods of performing integrated circuit packages, as well as to devices for separating integrated circuit packages (Page 1, lines 4-5 of Applicant's originally-filed specification). The disclosure of Martin presents an endeavor to improvements in the cutting-out boards employed in stocking-factories for stretching knitted fabric and guiding cutters out of the same (col. 1, 2nd para.). No reasonable or fair interpretation could be presented that Martin is in the same field of the Applicant's endeavor. Consequently, the first prong of the test for the obviousness rejection based on Martin is not met, and therefore, the second prong of the test must be considered.

The second prong of the test is whether Martin is reasonably pertinent to the particular problem with which the Applicant is concerned. Applicant's endeavor includes circuit constructions having integrated circuit chips bonded to circuit boards which can be fabricated by joining integrated circuit chips on a single large circuit board and subsequently cutting the circuit board to separate discrete constructions from one another, the discrete constructions referred to as integrated circuit packages (Page 1, lines 8-13 of the originally-filed specification). Difficulties can occur during the separation of the integrated circuit packages such that the separated integrated circuit packages can be broken as the stripper

plate is lifted off the pins. (Page 4, lines 18-20 of the originally-filed specification). Accordingly, a problem that the Applicant is concerned with was to reduce or eliminate breakage of integrated circuit packages during the processing thereof. However, the problem specifically stated in Martin was concerned with, "the object of my invention is to ensure a more uniform stretching of the said fabric [knitted fabric] and greater exactitude in cutting out the stocking-blanks" (Second paragraph of column 1). In no fair or reasonable interpretation can it possibly be argued that a person dealing with reducing or eliminating breakage of integrated circuit packages during the processing thereof would consider a reference dealing with ensuring a more uniform stretching of fabric and greater exactitude in cutting out the stocking-blanks. Accordingly, the second prong of the non-analogous test for obviousness is not met.

Since both prongs of the test are answered in the negative, Martin as a reference for reliance for the obviousness rejection against claim 22 is improper and should be withdrawn. For this additional reason, claim 22 is allowable. For all the above reasons, claim 22 is allowable over Kleine and Martin, singularly or in any combination. Applicant respectfully requests allowance of claim 22 in the next office action.

If the Examiner maintains the obviousness rejections based on Kleine and Martin against claim 22, Applicant respectfully requests identification of additional prior art or specific teachings within the existing art in a non-final office action which discloses the alleged teachings suggested by the Examiner, or the

submission of an affidavit to support the Examiner's rejection, pursuant to MPEP §2144.03 and 37 C.F.R. §1.104(d)(2). "Assertions of technical facts in areas of esoteric technology must always be supported by citation of some reference" and "allegations concerning specific 'knowledge' of the prior art, which might be particular to a particular art should also be supported." *In re Ahlert*, 424 F.2d 1088, 165 USPQ 418, 420-421 (CCPA 1970) (emphasis added). 37 C.F.R. §1.104(d)(2) states "when a rejection in an application is based on facts within the personal knowledge of an employee of the office, the rejection must be supported by an affidavit when called for by the applicant." The Examiner is relying on the conclusion that a recited limitation of claim 22 is a "design choice" without pointing to any teaching of such limitation. Accordingly, the rejection can only be based upon the personal knowledge of the Examiner. Identification of additional prior art or specific teachings within the existing art, or an affidavit, is requested and appropriate.

Claims 31-34 and 92-100 depend from independent claim 22, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are neither shown or taught by the art of record.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the

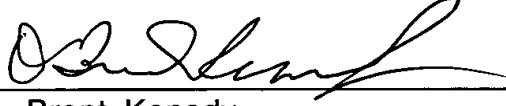
Appl. No. 09/687,600

undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

Dated: 6-21-02

By:


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Examiner Stephen Choi
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Title: Integrated Circuit Package Separators

VERSION WITH MARKINGS TO SHOW CHANGES MADE ACCOMPANYING
RESPONSE TO FINAL OFFICE ACTION DATED MARCH 21, 2002
TO ACCOMPANY RCE FILING

In the Specification

The replacement specification paragraphs incorporate the following amendments. Underlines indicate insertions and ~~strikeouts~~ indicate deletions.

The paragraph on page 10, beginning at line 12, has been amended as follows:

Panels 132, 134 and 136 comprise ribs 140, 142 and 144, respectively (only some of which are labeled). Ribs 140, 142 and 144 can assist in supporting board assembly 10. Specifically, IC chips 12 are frequently provided on both an upper surface of circuit board assembly 10, and a bottom surface (not shown). Ribs 140, 142 and 144 (also referred to as blocks) have upper surfaces 141, 143 and 145, respectively, which contact the bottom surfaces of circuit boards 11, 13 and 15 at locations between the IC chips 12 on the bottom of the board. Exemplary upper surfaces 141, 143 and 145 comprise curved upper surfaces of ribs (blocks) 140, 142 and 144, respectively. Preferably, such upper surfaces are provided at a height approximately equal to a thickness of integrated circuit chip components 12. Accordingly, when boards 11, 13 and 15

are rested on panels 132, 134 and 136, respectively, the boards rest on the upper surfaces of blocks 140, 142 and 144 while leaving integrated circuit chip components on the underside of boards 11, 13 and 15 extending between block upper surfaces 141, 143 and 145 and panels 132, 134 and 136. An exemplary block height (or thickness) of blocks 140, 142 and 144 for a DRAM having IC chips 12 and TSOP dimensional package is 0.040 inches ± 0.005 inches. As another example, if IC chips 12 have a SOJ dimensional package, the block height is preferably 0.140 inches ± 0.005 inches.

In the Claims

The claims have been amended as follows. Underlines indicate insertions and ~~strikeouts~~ indicate deletions.

Claims

There are no amendments to the claims.

New Claims

Please add the following new claims:

92. (New) The separator of claim 22 further comprising an actuator beneath the panel and configured to vertically displace the panel.

93. (New) The separator of claim 22 further comprising a pneumatically-powered actuator beneath the panel and configured to vertically displace the panel.

94. (New) The separator of claim 22 further comprising an actuator having plates beneath the panel, the plates moveable to contact and vertically displace the panel.

95. (New) The separator of claim 22 further comprising:
a support beneath the panel; and
an actuator having plates beneath the support, the plates moveable to contact and vertically displace the support and panel.

96. (New) The separator of claim 22 further comprising:
a support beneath the panel; and
an actuator having plates beneath the support, the plates moveable to contact and vertically displace the support and panel, and the plates comprising pins configured to extend through openings in the support.

97. (New) The separator of claim 39 wherein the plate pins comprise tapered distal end portions.

98. (New) The separator of claim 39 wherein the plate pins comprise tapered portions only at distal ends of the plate pins.

99. (New) The separator of claim 39 wherein the plate pins comprise cylindrical base portions and tapered distal portions.

100. (New) The separator of claim 22 further comprising pins extending upwardly from beneath the panel to beyond an upper surface of the panel, the pins configured to extend into the board and retain the board spaced from the panel.

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